# DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

#### LAKE TROPHIC DATA

### MORPHOMETRIC:

Lake: CONWAY LAKE Lake Area (ha): 525.48 Town: CONWAY Maximum depth (m): 14.9 County: Carroll Mean depth (m): 6.2 River Basin: Saco Volume (m<sup>3</sup>): 32390500 Latitude: 43°57'47" N Relative depth: 0.6 Longitude: 71°03'37" W Shore configuration: 2.81 Elevation (ft): 437 Areal water load (m/yr): 6.85 Shore length (m): 22800 Flushing rate (yr<sup>-1</sup>): 1.10 Watershed area (ha): 5982.9 Pretention coeff.: 0.60 % watershed ponded: 0.9 Lake type: natural w/dam

BIOLOGICAL:		1 February 1994	20 August 1993
DOM. PHYTOPLANKTON (% TOTAL)	#1	ASTERIONELLA 85%	DINOBRYON 40%
	#2		CHRYSOSPHAERELLA 30%
1	#3		
PHYTOPLANKTON ABUNDANCE (cells/ml	E (cells/mL) 570		570
CHLOROPHYLL-A (µg/L)			2.25
DOM. ZOOPLANKTON (% TOTAL)	#1	CALANOID COPEPOD 42%	POLYARTHRA 36%
	#2	NAUPLIUS LARVA 35%	KERATELLA 25%
	#3		NAUPLIUS LARVA 18%
ROTIFERS/LITER		6	103
MICROCRUSTACEA/LITER		20	49
ZOOPLANKTON ABUNDANCE (#/L)		26	152
VASCULAR PLANT ABUNDANCE			Scat/Common
SECCHI DISK TRANSPARENCY (m)			7.5
BOTTOM DISSOLVED OXYGEN (mg/L)		10.3	0.3
BACTERIA (E. coli, #/100 ml)	#1		2
1	#2		68
	#3		

## SUMMER THERMAL STRATIFICATION:

#### stratified

Depth of thermocline (m): 6.4 Hypolimnion volume  $(m^3)$ : 2837500 Anoxic volume  $(m^3)$ : 784000

CHEMICAL:			CONWAY LA	KE	
	1 Febru	ary 1994	20 August 1993		
DEPTH (m)	4.0	8.0	2.5	7.0	12.0
pH (units)	6.5	6.4	6.9	6.4	6.0
A.N.C. (Alkalinity)	3.7	3.7	3.9	4.1	5.1
NITRATE NITROGEN	< 0.05	0.05	< 0.02		< 0.02
TOTAL KJELDAHL NITROGEN	0.20	0.37	0.30	0.15	0.21
TOTAL PHOSPHORUS	0.006	0.005	0.005	0.007	0.014
CONDUCTIVITY (µmhos/cm)	36.2	36.2	35.5	35.9	37.6
APPARENT COLOR (cpu)			10	13	37
MAGNESIUM			0.31		
CALCIUM			2.0		
SODIUM			3.6		
POTASSIUM			< 0.40		
CHLORIDE	5	5	5		5
SULFATE	3	3	3		3
TN : TP	33	84	60		15
CALCITE SATURATION INDEX			3.5		

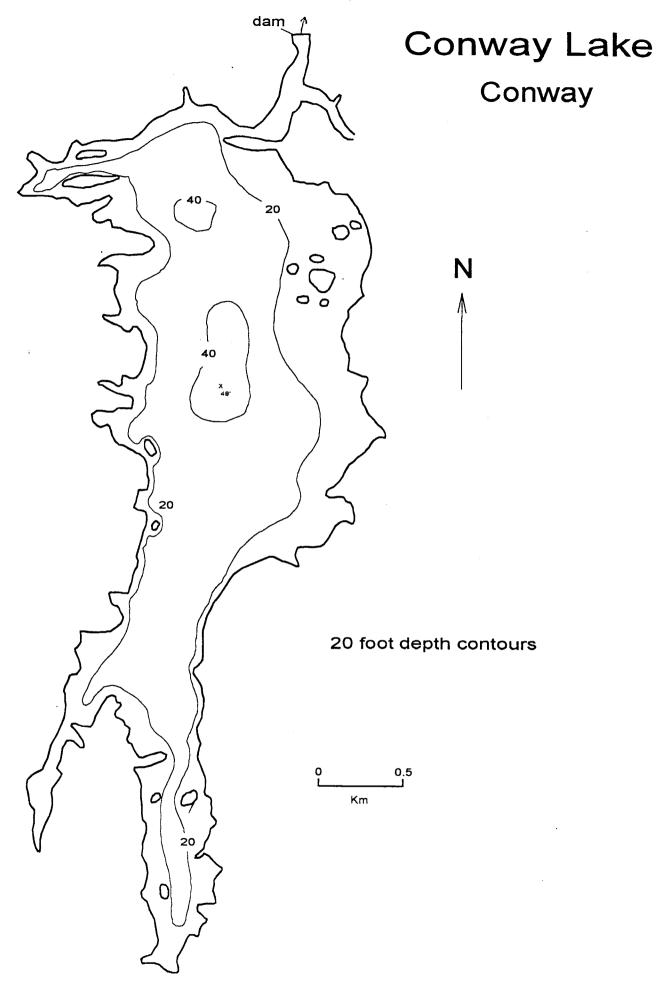
All results in mg/L unless indicated otherwise

## TROPHIC CLASSIFICATION: 1993

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
3	0	2	0	5	Oligo.

## **COMMENTS:**

- 1. This lake was previously surveyed and classified in 1979. One less trophic point was received in 1994, but this moved the lake from a mesotrophic to oligotrophic classification. Rooted plant growth appeared slightly more abundant in 1994, and the water clarity nearly doubled (from 13 feet in 1979 to 25 feet in 1994).
- 2. A town beach was located near the dam in the narrow outlet channel; numerous ducks were observed near the beach.
- 3. Good, paved boat launch was present.
- 4. <u>Chroomonas</u> (65%) was the dominant wholewater phytoplankton.



## FIELD DATA SHEET

LAKE: CONWAY LAKE

TOWN: CONWAY

DATE: 08/20/93

WEATHER: BREEZY, OVERCAST

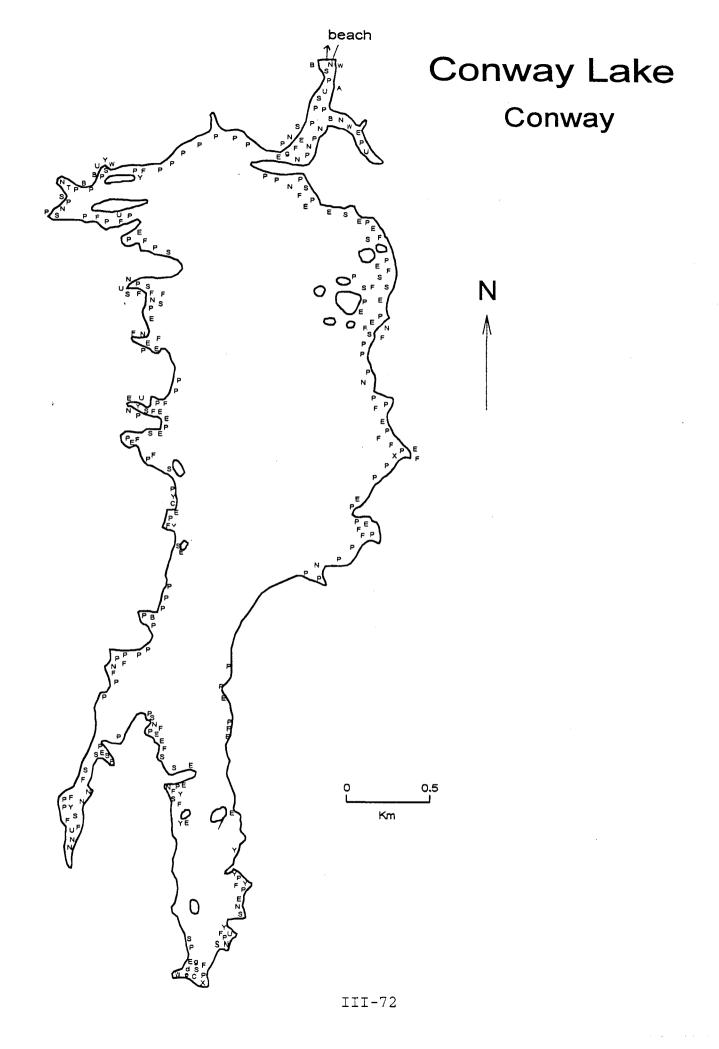
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DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
0.1	23.5	8.7	100 %
1.0	23.0	8.6	99 %
2.0	22.7	8.6	97 %
3.0	22.2	8.7	98 %
4.0	22.0	8.7	98 %
5.0	21.5	8.5	94 %
6.0	19.5	8.0	86 %
7.0	16.0	6.2	63 %
8.0	14.0	3.4	33 %
9.0	12.0	1.3	12 %
10.0	11.0	1.4	13 %
11.0	10.5	0.7	6 %
12.0	10.0	0.4	4 %
13.0	10.0	0.3	3 %
13.5	10.0	0.3	3 %
			<u> </u>

SECCHI DISK (m): 7.5 COMMENTS:

BOTTOM DEPTH (m): 14.0

TIME: 1430

\*Dissolved oxygen values are in mg/L



# AQUATIC PLANT SURVEY

LAK	E: CONWAY LAKE	TOWN: CONWAY	DATE: 08/20/93	
Key	PLANT NAME			
	GENERIC	COMMON	ABUNDANCE	
P	Pontederia cordata	Pickerelweed	Scat/Common	
S	Sparganium	Bur reed	Scat/Common	
N	Nymphaea	White water lily	Scattered	
В	Brasenia schreberi	Water shield	Scattered	
W	Potamogeton natans	Floating-leaf pondweed	Sparse	
บ	Utricularia	Bladderwort	Scat/Common	
E	Eriocaulon septangulare	Pipewort	Scattered	
g	Cyperaceae	non-flowering sedge	Sparse	
F	Nymphoides cordatum	Floating heart	Scat/Common	
Y	Nuphar	Yellow water lily	Sparse	
Х		Sterile thread-like leaf	Sparse	
С	Ceratophyllum demersum	Coontail	Sparse	
е	Elodea nuttallii	Waterweed	Sparse	
d	Dulichium arundinaceum	Three-way sedge	Sparse	
Т	Typha	Cattail	Sparse	
A	Sagittaria	Arrowhead	Sparse	

## OVERALL ABUNDANCE: Scat/Common

# **GENERAL OBSERVATIONS:**

- 1. Both white and pink flowered varieties of Nymphaea were observed.
- 2. Five loons were present.
- 3. Most of the shoreline was undeveloped.